

CLAIMS

What is claimed is:

1. A system, comprising:

a holding mechanism for engaging at least one illumination device, wherein the at least

5 one illumination device is non-incendiary; and

a deploying mechanism for causing the at least one illumination device to exit the system.

2. The system of claim 1, wherein the holding mechanism comprises:

a clamp for contacting the at least one illumination device; and

10 a guide for engaging the illumination device to ensure proper orientation of the at least

one illumination device.

3. The system of claim 1, wherein the holding mechanism comprises one of a group

consisting of:

15 a clamp;

a magnetic coupling mechanism;

a compliant coupling mechanism; and

a chemical adhesive.

20 4. The system of claim 1, further comprising a locking mechanism to prevent

accidental deployment of the at least one illumination device from the system.

5. The system of claim 2, wherein the holding mechanism further comprises a charging mechanism, wherein the charging mechanism comprises a circuit board coupled to the clamp, wherein the clamp forms an electrical connection between the at least one illumination device and the charging mechanism.

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6. The system of claim 1, wherein the deploying mechanism comprises at least one solenoid, wherein the at least one solenoid extends to cause the at least one illumination device to exit the system.

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7. The system of claim 1, wherein the deployment mechanism consists of one of a group comprising:

a gravity-fed door;

a gate release mechanism;

a corkscrew mechanism;

an explosive;

a chemical reaction;

magnetic or electromagnetic force;

pneumatics;

fluidics;

an electric motor;

an internal combustion engine; and

at least one solenoid.

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8. The system of claim 1, further comprising a housing, wherein the holding mechanism resides within the housing.

9. The system of claim 8, further comprising an inner plate coupled to the housing, 5 wherein the inner plate comprises at least one slot, wherein the at least one illumination device resides within the at least one slot when engaged with the holding mechanism.

10. The system of claim 1, wherein the least one illumination device comprises: 10 a shell comprising a plurality of sides, wherein the at least one illumination device can be positioned upon a surface or attached or suspended at any of the plurality of sides; and at least one light-emitting device within the shell, wherein when the at least one illumination device is positioned upon a surface or attached or suspended at any of the plurality of sides of the shell, light from the at least one light-emitting device emits through each of the plurality of sides of the shell.

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11. The system of claim 10, wherein the shell comprises a top half coupled to a bottom half.

12. The system of claim 11, wherein the top half and the bottom half are symmetrical.

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13. The system of claim 10, wherein the shell comprises a plurality of primary ribs for providing rigidity.

14. The system of claim 13, wherein the shell further comprises a plurality of secondary ribs.

5 15. The system of claim 10, wherein the shell comprises a liquid or gel or solid material within the shell.

16. The system of claim 10, wherein the shell comprises at least one hole, wherein at least one electrical contact can reside within the at least one hole.

10 17. The system of claim 10, further comprising a circuit board within the shell, wherein the at least one light-emitting device is coupled to the circuit board.

18. The system of claim 10, further comprising an energy source within the shell.

15 19. The system of claim 18, wherein the energy source comprises one or more of the group consisting of:

a non-rechargeable power source;

a rechargeable power source;

at least one solar cell; and

20 an inductive power source.

20. The system of claim 10, further comprising an energy source external to the shell.

21. The system of claim 18, further comprising at least one contact capable of forming an electrical connection between the energy source and the holding mechanism, wherein the holding mechanism comprises a charging mechanism.

5 22. The system of claim 21, wherein the at least one contact comprises an indentation about its circumference, wherein an o-ring can reside within the indentation.

10 23. The system of claim 10, further comprising a communication port for transmitting a signal from the device and for receiving a signal from outside the at least one illumination device.

24. The system of claim 23, wherein a signal programming a pattern of light emission is received by the at least one illumination device utilizing the communication port.

15 25. The system of claim 23, wherein a signal programming the at least one illumination device in synchronization or cooperation with other illumination devices in a network is received or sent by the at least one illumination device utilizing the communication port.

20 26. The system of claim 23, wherein the at least one illumination device receives a signal at its communication port to turn on or off.

27. The system of claim 10, further comprising an outer layer residing outside of the shell.

28. The system of claim 27, wherein the outer layer is coupled to the shell.

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29. The system of claim 27, wherein the outer layer seals the shell.

30. The system of claim 27, wherein the outer layer comprises at least one window, wherein the at least one light-emitting device emits light through the at least one window.

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31. The system of claim 27, wherein the light from the at least one light-emitting device emits light through an optically transmissive outer layer.

32. The system of claim 27, wherein the outer layer is formed by an injection mold process.

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33. The system of claim 10, wherein the at least one light-emitting device comprises one or more of the group consisting of:

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a light-emitting diode (LED);

a laser source;

a fluorescent tube;

a strobe light;

an incandescent bulb;

a waveguide; and

a surface light emitter.

5 34. The system of claim 1, wherein the system is utilized in traffic safety or control.

35. The system of claim 1, wherein the at least one illumination device automatically turns on when disengaged from the holding mechanism.

10 36. A system, comprising:

a holding mechanism, comprising:

a clamp for contacting at least one illumination device, and

a guide for engaging the illumination device to ensure proper orientation of the at least one illumination device; and

15 a deploying mechanism, comprising:

at least one solenoid, wherein the at least one solenoid extends to cause the at least one illumination device to exit the system.

37. The system of claim 36, wherein the at least one illumination device comprises:

20 a shell comprising a plurality of sides, wherein the at least one illumination device can be positioned upon a surface or attached or suspended at any of the plurality of sides; and

at least one light-emitting device within the shell, wherein when the at least one

illumination device is positioned upon a surface or attached or suspended at any of the plurality of sides of the shell, light from the at least one light-emitting device emits through each of the plurality of sides of the shell.

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38. A system, comprising:

a holding mechanism for engaging at least one illumination device, the at least one illumination device comprising:

a shell comprising a plurality of sides, wherein the at least one illumination device can be positioned upon a surface or attached or suspended at any of the plurality of sides, and
10 at least one light-emitting device within the shell, wherein when the at least one illumination device is positioned upon a surface or attached or suspended at any of the plurality of sides of the shell, light from the at least one light-emitting device emits through each of the plurality of sides of the shell; and

a deploying mechanism for causing the at least one illumination device to exit the system.

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39. The system of claim 38, wherein the holding mechanism comprises:

a clamp for contacting the at least one illumination device; and

a guide for engaging the illumination device to ensure proper orientation of the illumination device.

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40. The system of claim 38, wherein the holding mechanism comprises one of a group consisting of:

a clamp;
a magnetic coupling mechanism;
a compliant coupling mechanism; and
a chemical adhesive.

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41. The system of claim 38, further comprising a locking mechanism to prevent accidental deployment of the at least one illumination device from the system.

10 42. The system of claim 39, wherein the holding mechanism further comprises a charging mechanism, wherein the charging mechanism comprises a circuit board coupled to the clamp, wherein the clamp forms an electrical connection between the at least one illumination device and the charging mechanism.

15 43. The system of claim 38, wherein the deploying mechanism comprises at least one solenoid, wherein the at least one solenoid extends to cause the at least one illumination device to exit the system.

44. The system of claim 38, wherein the deployment mechanism consists of one of a group comprising:

20 a gravity-fed door;
a gate release mechanism;
a corkscrew mechanism;

an explosive;
a chemical reaction;
magnetic or electromagnetic force;
pneumatics;
5 fluidics;
an electric motor;
an internal combustion engine; and
at least one solenoid.

10 45. A system, comprising:
a first deployment system, comprising:
a first holding mechanism for engaging at least a first illumination device, wherein
the first illumination device is non-incendiary, and
a first deploying mechanism for causing the first illumination device to exit the
15 first deployment system; and a second deployment system, comprising:
a second holding mechanism for engaging at least a second illumination device,
wherein the second illumination device is non-incendiary, and
a second deploying mechanism for causing the second illumination device to exit
the second deployment system.

20 46. The system of claim 45, wherein the first holding mechanism comprises:
a clamp for contacting the first illumination device; and

5 a guide for engaging the first illumination device to ensure proper orientation of the first illumination device.

47. The system of claim 45, wherein the second holding mechanism comprises:

5 a clamp for contacting the second illumination device; and

a guide for engaging the second illumination device to ensure proper orientation of the second illumination device.

48. The system of claim 45, wherein the first holding mechanism comprises one of a

10 group consisting of:

a clamp;

a magnetic coupling mechanism; and

a chemical adhesive.

15 49. The system of claim 45, wherein the second holding mechanism comprises one of

a group consisting of:

a clamp;

a magnetic coupling mechanism;

a compliant coupling mechanism; and

20 a chemical adhesive.

50. The system of claim 46, wherein the first holding mechanism further comprises a

charging mechanism, wherein the charging mechanism comprises a circuit board coupled to the clamp, wherein the clamp forms an electrical connection between the first illumination device and the charging mechanism.

5 51. The system of claim 46, wherein the second holding mechanism further comprises a charging mechanism, wherein the charging mechanism comprises a circuit board coupled to the clamp, wherein the clamp forms an electrical connection between the second illumination device and the charging mechanism.

10 52. The system of claim 45, wherein the first deployment system comprises at least one solenoid, wherein the at least one solenoid extends to cause the first illumination device to exit the first deployment system.

15 53. The system of claim 45, wherein the first deployment mechanism consists of one of a group comprising:

20 a gravity-fed door;
a gate release mechanism;
a corkscrew mechanism;
an explosive;
a chemical reaction;
magnetic or electromagnetic force;
pneumatics;

fluidics;
an electric motor;
an internal combustion engine; and
at least one solenoid.

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54. The system of claim 45, wherein the second deployment system comprises at least one solenoid, wherein the at least one solenoid extends to cause the second illumination device to exit the second deployment system.

10 55. The system of claim 45, wherein the second deployment mechanism consists of one of a group comprising:

a gravity-fed door;
a gate release mechanism;
a corkscrew mechanism;
an explosive;
a chemical reaction;

magnetic or electromagnetic force;
pneumatics;

fluidics;

20 an electric motor;
an internal combustion engine; and
at least one solenoid.

56. The system of claim 45, wherein the first illumination device comprises:

a shell comprising a plurality of sides, wherein the first illumination device can be positioned upon a surface or attached or suspended at any of the plurality of sides; and

5 at least one light-emitting device within the shell, wherein when the first illumination device is positioned upon a surface or attached or suspended at any of the plurality of sides of the shell, light from the at least one light-emitting device emits through each of the plurality of sides of the shell.

10 57. The system of claim 45, wherein the second illumination device comprises:

a shell comprising a plurality of sides, wherein the second illumination device can be positioned upon a surface or attached or suspended at any of the plurality of sides; and

15 at least one light-emitting device within the shell, wherein when the second illumination device is positioned upon a surface or attached or suspended at any of the plurality of sides of the shell, light from the at least one light-emitting device emits through each of the plurality of sides of the shell.

58. The system of claim 45, further comprising an interface or automatic controller

20 for controlling both the first and second deployment systems.